

**Louisville Metro Air Pollution Control District**  
**850 Barret Ave., Louisville, Kentucky 40204**  
**June 05, 2014**

**Construction Statement of Basis**

**Company:** Eckart America Corporation

**Plant Location:** 4101 Camp Ground Road, Louisville, KY 40211

**Date Application Received:**  
10/27/1989

**Application Number:**  
65327

**Public Comment Date:** 06/05/2014

**Proposed Permit Date:** 06/05/2014

**District Engineer:** Chris Gerstle

**Permit No:** TV-14-1006-C

**Plant ID:** 187

**SIC Code:** 3399

**NAICS:** 331314

**AFS:** 00187

**Introduction:**

This permit will be issued pursuant to District Regulation 2.03, Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), 1 hr and 8 hr ozone (O<sub>3</sub>), and particulate matter less than 10 microns (PM<sub>10</sub>); and is a non-attainment area for particulate matter less than 2.5 microns (PM<sub>2.5</sub>) and partial non-attainment for sulfur dioxide (SO<sub>2</sub>).

**Application Type/Permit Activity:**

☐ Initial Issuance

☒ Permit Revision

☐ Administrative

☐ Minor

☒ Significant

☐ Permit Renewal

☒ Construction

**Compliance Summary:**

☐ Compliance certification signed

☐ Compliance schedule included

☐ Source is out of compliance

☒ Source is operating in compliance

**I. Source Information**

1. **Product/Process Description:** The source produces aluminum powder and paste.
2. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
3. **Emission Unit Summary:**

Unit	Name
U-1	Boiler Room

4. **Permit Revisions:**

Revision No.	Date or Reissuance	Public Notice Date	Type	Emission Unit	Description
Initial	??/??/2014	06/05/2014	Initial	Entire Permit	Correcting the emission standards from Permits 381-90-C and 382-90-C

5. **Fugitive Sources:** There are no fugitive emissions for this project.
6. **Plant-wide Emission Summary:**

Pollutant	District Calculated Actual Emissions 2012 Data (tpy)	Major Source Status (based on PTE)
CO	2.96	No
NO <sub>x</sub>	3.52	No
SO <sub>2</sub>	0.02	No
PM/PM <sub>10</sub>	22.72	Yes
VOC	62.10	Yes
Total HAPs	0.81	No
GHG	11,948	No

\*Note: The GHG are potential to emit (PTE) emissions not actual emissions.

7. **Applicable Requirements:**

☐ PSD      ☐ 40 CFR 60      ☐ 40 CFR 63      ☒ SIP  
☐ NSR      ☐ 40 CFR 61      ☒ District-Origin      ☐ Other

8. **MACT Requirements:**

This source is not major for HAPs and is not subject to MACT regulations.

9. **Referenced non-MACT Federal Regulations in Permit:**

N/A

**II. Regulatory Analysis**

1. **Acid Rain Requirements:** The source is not subject to the Acid Rain Program.
2. **Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source's

use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

- 3. Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount. If the source becomes subject to 40 CFR 68 and Regulation 5.15, the source shall comply with the Risk Management Program and Regulation 5.15 and submit a Risk Management Plan to:

RMP Reporting Center  
P.O. Box 3346  
Merrifield, VA 22116-3346

**4. Basis of Regulation Applicability**

**a. Applicable Regulations:**

Regulation	Title	Type
2.01	General Application	SIP
2.02	Air Pollution Regulation Requirements and Exemptions	SIP
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements	SIP
2.04	Construction or Modification or Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)	SIP
2.05	Prevention of Significant Deterioration of Air Quality	SIP
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits	SIP
2.08	Emissions Fees, Permit Fees, Permit Renewal Procedures, and Additional Program Fees	Local
2.09	Causes for Permit Modification, Revocation, or Suspension	SIP
2.10	Stack Height Considerations	SIP
2.11	Air Quality Model Usage	SIP
2.16	Title V Operating Permits	SIP
4.01	General Provisions for Emergency Episodes	SIP
4.02	Episode Criteria	SIP
4.03	General Abatement Requirements	SIP
4.07	Episode Reporting Requirements	SIP
5.00	Standards for Toxic Air Contaminants and Hazardous Air Pollutants	Local
5.01	General Provisions	SIP
5.02	Federal Emission Standards for Hazardous Air Pollutants Incorporated by Reference	Local
5.14	Hazardous Air Pollutants and Source Categories	Local
5.15	Chemical Accident Prevention Provisions	Local
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	Local
5.21	Environmental Acceptability for Toxic Air Contaminants	Local
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	Local
5.23	Categories of Toxic Air Contaminants	Local
6.01	General Provisions (for <i>Existing Affected Facilities</i> )	SIP
6.02	Emission Monitoring for Existing Sources	SIP
7.06	Standards of Performance for New Indirect Heat Exchangers	SIP

Regulations 5.00, 5.01, 5.20, 5.21, 5.22 and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.

The TAC emissions from the combustion of natural gas are considered to be “de minimis emissions” by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas. (Regulation 5.21, section 2.7)

Regulation 2.03, section 6.1 requires sufficient monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

b. **Basis for Applicability**

Regulation	Basis for Applicability
2.03	Establishes requirements for Permits to Construct and Operate
5.00	Establishes definitions of terms used in the Strategic Toxic Air Reduction Program.
5.01	Establishes general provisions for process equipment from which a toxic air contaminant is or may be emitted.
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.20	Establishes the methodology for determining the benchmark ambient concentration of a toxic air contaminant.
5.21	Establishes the criteria for determining the environmental acceptability of emissions of toxic air contaminants.
5.22	Establishes the procedures for determining the maximum ambient concentration of a toxic air contaminant.
5.23	Establishes categories of toxic air contaminants.
7.06	Applies to each indirect heat exchanger having input capacity of more than one million BTU per hour commenced after September 1, 1976.

c. **Emission Unit U-1 Boiler Room**

i. **Equipment**

Emission Point	Description	Applicable Regulations
E-1	Boiler #5, natural gas fired only	STAR, 7.06
E-2	Boiler #4, natural gas fired only	

ii. **Standards/Operating Limits**

1) **PM**

In accordance with Regulation 7.06, section 4.1.4, PM emissions are limited to 0.342 pounds per million BTU actual total heat input for Emission Points E-1 and E-2.

$$E = 1.919 \times (25.066)^{-0.535} = 0.342 \text{ lb/mmBTU}$$

2) **Opacity**

The boilers are subject to the opacity standards in accordance with Regulation 7.06, section 4.2.

3) **SO<sub>2</sub>**

In accordance with Regulation 7.06, section 5.1.1, SO<sub>2</sub> emissions are limited to 1.0 pounds per million BTU actual total heat input for Emission Point Points E-1 and E-2 because the total heat input capacity is less than 145 million BTU per hour.

4) **TAC**

Per Regulations 5.00 and 5.21, TAC emissions must not exceed environmentally acceptable levels.

iii. **Monitoring, Record Keeping and Reporting****SO<sub>2</sub>/PM/Opacity**

(a) A one-time PM and SO<sub>2</sub> compliance demonstration has been performed for the boilers, using AP-42 emission factors and combusting natural gas, and the emission standards cannot be exceeded. Therefore, there are no monitoring, record keeping, and reporting requirements for these boilers with respect to PM and SO<sub>2</sub> emission limits.

(b) The District has determined that using a natural gas fired boiler will inherently meet the 20% opacity standard. Therefore, the company is not required to perform periodic monitoring to demonstrate compliance with the opacity standard.

**III. Other Requirements**

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Operational Flexibility:** The source did not request any operational flexibility for the emission points.
5. **Compliance History:**

Incident Date	Regulations Violated	Result
8/9/2006	2.03.5.2 Failure to Comply with District Permit	Board Order
3/8/2011	2.16.5.2 Failure to Comply with Title V Permit	Board Order
6/7/2011	2.03.5.2 Failure to Comply with District Permit	Board Order
6/7/2011	2.03.1.2 Operating Equipment without a District Permit	Board Order
6/7/2011	2.16.5.2 Failure to Comply with Title V Permit	Board Order

6. **Calculation Methodology:**

The emission calculations for the various pieces of equipment associated with this permit are derived from stack test results, AP-42 emission factors, EPA's Emission Inventory

Improvement Program, EPA guidance documents, mass balances and engineering judgments. Other calculation methodologies may be used after receiving written approval from the District.

**AP-42 Emission factors**

- Combustion emissions (Chapter 1.4-1, 1.4-2, 1.4-3, & 1.4-4 (small boilers))

**7. Insignificant Activities:**

There are no insignificant activities in this project.